

# PATENT ABSTRACTS OF JAPAN

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## (54) MEASURING INSTRUMENT FOR UNSTEADY DEGREE FOR TOOTH

### (57)Abstract:

PURPOSE: To provide a measuring instrument with which the unsteady degree of a tooth can be provided as objective data.

CONSTITUTION: This instrument is provided with a digital vibrated signal generator 10 for digitizing vibrated waveforms, storing them in a memory, successively D/A converting these waveforms and reproducing them as the analog signals of any arbitrary frequency and waveform and a driver 14 for vibrating a tooth 12 by converting the electric signals of the vibrated signal generator to mechanical vibrations. Further, the instrument is provided with an impedance head 16 for detecting power required for the driver 14 to vibrate the tooth 12 and acceleration in that case and an analyzer 18 for calculating the transmission function of power corresponding to the acceleration by performing Fourier transform to the data detected by the impedance head 16, and providing the physical amounts of respective elastic element, viscosity element and mass element by approximating vibrations near the resonant point of the tooth and an periodontal tissue with a single resonant model composed of the respective elements.

